# Mathematics Toolkit: Grade 5 Objective 1.B.2.a

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| Standard 1.0 Knowledge of Algebra, Patterns, and Functions |
| Topic B. Expressions, Equations, and Inequalities |
| Indicator 2. Identify, write, solve, and apply equations and inequalities |
| Objective a. Represent relationships by using the appropriate relational symbols (>, <, =) and one operational symbol (+, -, ×, ÷ with no remainders) on either side |
| Assessment Limits: |
| Use whole numbers (0 – 400) |

# Table of Contents

## Sample Item #1 - Brief Constructed Response (BCR) Item

Mathematics Grade 5 Objective 1.B.2.a

On Monday, 32 people went to the park before noon. In the afternoon, 24 more people came. On Tuesday, 26 people came to the park before noon. In the afternoon, 29 more people came.

### Step A

Write a number sentence showing the relationship between the number of people at the park on Monday and the number of people at the park on Tuesday.

### Step B

Explain why your answer is correct.
Use what you know about number relationships in your explanation.
Use words and/or numbers in your explanation.

Correct Answer:
Step A
32 + 24 > 26 + 29 or 56 > 55

Answer Annotation

Sample correct response: I added 32 + 24 and got 56. I added 26 + 29 and got 55. Since 56 > 55, 32 + 24 > 26 + 29.

## Rubric - Brief Constructed Response (BCR)

Score 2
The response demonstrates a complete understanding and analysis of a problem.

- Application of a reasonable strategy in the context of the problem is indicated.
- Explanation[1] of and/or justification[2] for the mathematical process(es) used to solve a problem is clear, developed, and logical.
- Connections and/or extensions made within mathematics or outside of mathematics are clear.
- Supportive information and/or numbers are provided as appropriate. [3]

Score 1
The response demonstrates a minimal understanding and analysis of a problem.

- Partial application of a strategy in the context of the problem is indicated.
- Explanation[1] of and/or justification[2] for the mathematical process(es) used to solve a problem is partially developed, logically flawed, or missing.
- Connections and/or extensions made within mathematics or outside of mathematics are partial or overly general, or flawed.
- Supportive information and/or numbers may or may not be provided as appropriate.[3]

Score 0
The response is completely incorrect, irrelevant to the problem, or missing.[4]

Notes:

[1] Explanation refers to students' ability to communicate how they arrived at the solution for an item using the language of mathematics.

[2] Justification refers to students' ability to support the reasoning used to solve a problem, or to demonstrate why the solution is correct using mathematical concepts and principles.

[3] Students need to complete rubric criteria for *explanation*, *justification*, *connections* and/or *extensions* as cued for in a given problem.

[4] Merely an exact copy or paraphrase of the problem will receive a score of "0".

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